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22 October 2022

Online at <https://mpa.ub.uni-muenchen.de/115133/>
MPRA Paper No. 115133, posted 22 Oct 2022 13:55 UTC

ENTITLEMENT AND FOOD AVAILABILITY DECLINE (FAD)– THE USE OF FRAUD AND ABUSE IN FAMINE ECONOMICS

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ABSTRACT

Amartya Sen's ideological belief systems, 'food availability decline' (FAD) and 'entitlement' are examined. There is such a wide range of beliefs covered by the term 'FAD' that it has no analytical use. It is doubtful whether any significant number of economists ever held this belief. Many academics use 'FAD' as a term of abuse to suppress theory and evidence which they would rather not believe, such as criticisms of Sen's empirical economics. Similarly, 'entitlement' is used in abuse aimed at suppressing this evidence. It would be better to use the vast amount of testable and tested economics of food markets, which combine hard fact and hard theory.

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Ideological belief systems should not be used as a substitute for economic analysis: bad famine economics kills millions.

Keywords: Famine, Food Availability Decline, FAD, Fraud, Abuse

1. INTRODUCTION

Famine research is plagued by fraud. The example of the Bengal famine of 1943 shows people producing fraudulent evidence from 1942 to the present, initially to support beliefs on what should be done, to score political points or to cover up incompetence and corruption. A post-famine consensus was reached as secret information became available, but many subsequent commentators suppressed evidence or invented evidence, usually to switch blame to other countries, provinces, religious groups, or political systems. Then academics used fraud to support to support their ideological beliefs about the causes of famine. The further we move from contemporary sources, the more likely it is that writing on this famine will have been tainted by fraud. We are living in a world where it is widely believed that 20% of medical research is fraudulent (Smith, 2021), though the authors know that it will kill, maim or otherwise harm patients. We cannot assume that researchers on famine are any better.

Amartya Sen has written extensively on famine. There are three distinct steps in his approach. First, he produced empirical economic analyses of three famines, notably his economic theory of the 1943 Bengal famine. I do not examine this aspect here as it has already been strongly attacked by economists (e.g. (Bowbrick, 1986; 1987; 1988,

2008; 2022). Tauger (2003; 2006; 2009), Goswami (1990), Dyson and Maharatna (1991), Dyson (Dyson, 1991; 1996), Basu (1986; 1984). The Indian statistical profession had produced refutations of his key claim that there was sufficient food available in the 1940s: see Das (1949), Desai (1953), Dewey (1978), Tauger (2006; 2009), and Bowbrick (2020; 2022) for reviews of the literature on this. Similarly, Sen repeats the urban myths current at the time of the famine, though the Famine Inquiry Commission (1945) had refuted them. There has been no attempt to challenge these criticisms, but instead there have been rants, personal abuse and abuse of the evidence presented (See Nolan P. , (1991); Sen A. , (1991); Nolan & Sender, (1992); Sen A. , (1992); Nolan P. , (1993); Sen A. , (1993). Sen introduced new falsehoods when replying to Bowbrick (1985; 1987; 1986), to Tauger's (2011) criticisms, and to Mukerjee's attack on Churchill (Mukerjee, Madhusree, reply by Amartya Sen, 2011). See Bowbrick (2020) for a detailed analysis of this.

Second, Sen produced a belief system, notably that there was a more or less universal belief that famines were caused by 'food availability decline' and that this was wrong and harmful. Third, he produced a belief system, even further from any empirical economics, known as 'entitlement'. broad generalizations from his analysis of just these three observations. These belief systems have been widely accepted and used by academics. This is surprising as his beliefs were generalizations drawn from his analysis of just three famines and generalizations from such a small number are invalid. In addition, these examples were not randomly selected – two were where he grew up in what had been the Province of Bengal. The criticisms of his empirical analysis are also relevant.

This paper discusses these two belief systems and examines the use of abuse, suppression of criticisms, suppression of inconvenient facts (*suppressio veri*) and inventing evidence (*suggestio falsi*) by academics to protect the belief systems of ‘food availability decline’, and ‘entitlement’.

2. THE AGRICULTURAL MARKETING ECONOMICS

APPROACH

Over the centuries agricultural economics has been the mainstream economic approach to food and hunger. We now have an extremely powerful agricultural marketing economics, applying a high level of theory combined with practical experience in the form of tested economic models of how markets operate under different conditions. The economic models are of course specific to one country, or perhaps one area, at one time. More general theory is derived from these specific models. As a lot of money can be generated or lost in these markets, economists are expected by governments and firms to be rigorous, using hard theory and hard fact.

Agricultural economists routinely deal with changes in supply and demand, and with food crises. The borderline between a famine, a food crisis and normal life is arbitrary. It has been suggested that a famine is a food crisis in front of the television news cameras. Indeed, many people in the 38 countries I have worked in around the world faced hunger and died early in normal times (with quarter to half the children in a country dying before the age of five, and a much higher death rate for the poor, for

instance): this was not seen as unusual or as a food crisis, rather as chronic poverty. Accordingly, economists examine famines as agricultural markets under extreme conditions. The market continues to work during the famine, though the economic models have to be modified if there is food aid, rationing or famine relief.

Agricultural markets can be extremely complex, and when they come together as ‘the food market’ or ‘the agricultural sector’, they are more complex than any other market. Generalizations or beliefs are not acceptable to decision makers: they want analysis that is based on fact. Real-world economists are employed to analyse real markets and sectors, and to advise on what actions should be taken. This means that over the centuries agricultural economists have developed a quantity and quality of theory and practice that does not exist for other, simpler, markets.

A market is a linked system, and any change will have effects throughout that system, some significant, some negligible. The effects do not occur instantly, so a dynamic analysis is used, to predict the effects of a crop failure over the next year or two for instance. Supply may be affected by factors like changes in input cost and availability, droughts, floods, and plant diseases. Changes in demand may occur because of an occupying army (friendly or hostile), an influx of refugees, a change in the prices of export crops, a change in exchange rates, the collapse of a major industry, a boom or a slump, for instance. And of course, these changes have a greater impact on people working in some industries and living in some areas. The impact of a crop failure on subsistence farmers and on commercial farmers is very different, for instance. Some people do very well out of a famine.

The effects of a shock to a food sector are complex, with major effects felt by people who may be far from the shock. It may take more than a year for the most

noticeable impacts to be felt, and there can be long term impacts. Even a food crisis ('small famine, not many dead') affects food security in the longer run – two food crises in three years may well result in a full-blown famine. People become destitute, and this destitution may last for generations.

Agricultural economists have led in the theory and practice of market economics and marketing, but we draw on other traditions: in my career I have routinely scanned and used the literature of general economics – much of it originating in agricultural economics – such as consumption theory, market economics, marketing economics, marketing², rural sociology, the sociology of consumption, method and ethics.

3. SEN'S 'FOOD AVAILABILITY DECLINE'

We know that it is possible to label people with their colour, their ethnicity, their country of origin, their religious beliefs, their gender, their sexuality, their preferred sport or their right or left handedness, and then to use the label as a term of abuse, indicating that most or all such people have different intelligence, professional competence, professional ethics, commercial ethics or sexual ethics. History shows that this labelling can cause nations to lose their critical facilities and their belief in what is right and wrong. So we are, rightly, indignant when we see a politician who we disagree with using such labelling.

² For example, the first professors of marketing in Britain and continental Europe were in agricultural economics departments. The United States Department of Agriculture switched from being a production-oriented organization to a marketing-oriented one in the early 1950s.

Amartya Sen introduced the ‘Food Availability Decline’ (FAD) label. He adopted the rhetorical device of a ‘straw man’ – someone who holds a set of ridiculous beliefs – so that he could ridicule these beliefs. His ‘straw man’ believes in ‘Food Availability Decline’, one interpretation of which is the belief that virtually all famines are caused by a sudden fall in food supply, due to a crop failure for instance. Sen uses FAD in different, incompatible ways, always as a term of abuse.³ Sometimes it appears to mean the belief that all famines are caused solely by a fall in supply, sometimes the belief that a fall in supply is one contributing factor to one famine, sometimes the belief that increasing the supply will somehow solve all problems (i.e. ignoring the standard famine measures of issuing relief and rationing). His followers may use their own meanings, or ones they have developed themselves. One would normally take this multitude of definitions as an indication that the label is meaningless.

Sen uses the label ‘Food Availability Decline’ to abuse people who do not agree with him. I look at a few of his uses here.

“The FAD approach gives little clue to the causal mechanism of starvation since it does not go into the relationship of people to food. Whatever may be the oracular power of the FAD view, it is certainly Delphic in its reticence.” (Sen A. , 1981, p. 154)

This implies that no mainstream economics is FAD: the relationship of people to food has dominated economics for most of the past five hundred years at least. It is fundamental to agricultural and food economics in poor countries, at all levels from farm

³ *‘An interesting point to be noted from this encounter is that Sen’s interpretation of FAD theory in this reply appears contradictory to his original version given in the Economic and Political Weekly (Sen, 1976).’* (Elahi, 2017, p. 1)

economics, where it overlaps with rural sociology, to policy, where we face the problem of paying farmers enough to get them to produce more food, while at the same time selling the food at prices the poor can pay. Even in rich countries like the UK, the reasons that poor people go hungry and die young are important parts of food policy and social policy. This means that no agricultural economics discussion can be considered as FAD using this assertion of Sen's. Marketing economics, marketing, consumption economics, the economics of poverty and development economics are, again, outside Sen's definition. The Famine Inquiry Commission (1945) – Sen's main source on the 1943 Bengal famine, almost his only source – went into detail about the relationship of people to food, using evidence from urban sociology, rural sociology, economics, and health. Again, this report is not FAD under this definition of Sen's, though he calls it FAD when it suits the argument he is making at the time.

To accuse any marketing economists of ignoring 'the relationship of people to food' is very serious abuse. It is a statement that they are totally incompetent in their chosen area. They could expect to lose their jobs if their employers believe the abuse.

"Second, the rationale of the FAD approach, concentrating as it does on aggregate supply, rests in ignoring distributional changes" (Sen A. , 1981, p. 19)

Again, this definition means that orthodox economics, agricultural economics, marketing economics and marketing approaches, in which distributional changes are fundamental, do not meet Sen's definition of FAD. The Indian Government had examined distributional changes during famines in great depth a hundred years before Sen wrote (Hunter, 1873; Frere, 1874) , and took note of them in formalizing the laws for dealing with famine, the Indian Famine Code (Brennan, 1984), so its approach is not FAD under Sen's definition – but he accuses the Indian Government of having an FAD

policy. The Famine Inquiry Commission covered distributional changes in depth, providing all the illustrations used by Sen, so it is not FAD under this definition (though elsewhere he denounces it as FAD).

Again, it is very serious abuse, career threatening, to say that an agricultural economist or market economist ignores distributional changes.

“The FAD approach applied to the food availability for the population of an entire country is a gross approach, lacking in relevant discrimination.” (Sen A. , 1981, p. 157)

Compare this with Sen’s own analysis of the problems of Bengal, a province of 60 million people, as a single unit, and his rejection of Alamgir’s (1980) district by district approach (1981 p63). In a career covering nearly sixty years, working in 38 countries around the world with economists from perhaps 90 countries, trained in different economic traditions, I have not come across anyone who was not aware that some parts of a country and some occupation groups were hit harder than others in a food crisis, or, indeed in normal fluctuations in the economy. This, again, suggests that the FAD approach does not exist.

“Similarly, a sharp decline in the relative price of a commodity vis a vis food can jeopardize the ability to survive of the people who live by selling that commodity. This is especially so when the people involved are close to the subsistence level already and when they possess very few saleable assets. It seems reasonable to argue that in an exchange economy these considerations must be relevant to the development of famines, since it is through the exchange system that food for survival

is acquired by most people. The FAD approach avoids this central feature of an exchange economy.” (Sen 1977 p35).

Again, these considerations are fundamental to all agricultural economics, all of marketing economics, all of marketing, rural sociology and the sociology of consumption, to the Famine Inquiry Commission report in its entirety, the Indian Government research and policy since the 1870s, and the economics of poverty. Indeed, the owner of a corner shop will be well aware that sales are affected by the ups and downs of business in neighbouring factories. Here Sen is defining all these as not being FAD!

And, again, to accuse any agricultural economist, a marketing economist of being ‘a FAD supporter’ is to accuse them of being totally incompetent in all areas – it is career threatening.

“The empirical studies brought out several distinct ways in which famines can develop - defying the stereotyped uniformity of food availability decline (FAD).”

(Sen A. , 1981, p. 162)

Over the last three hundred thousand years our ancestors have faced frequent life-threatening food crises, and most people would have experienced famine at least once in their lifetimes. They thought about why such crises occur and why some people survive them when others do not, producing good and bad explanations. It is beyond belief that Sen, or any modern researcher, should come up with original explanations, as he claims. Different triggers have been recognized since beginning of recorded history, such as the incursion of an army, friendly or hostile, increasing demand, or food being exported because there was a higher price in another area or country. (Economists would differentiate between the events that trigger a famine, and the subsequent actions that

exacerbate it, or the inaction that allows a preventable famine to occur.) And, of course, each famine has a different combination of well-known factors affecting it. Famine was a constant threat everywhere until the combination of the agricultural revolution, the steamship and the railway, and the willingness of countries, empires, or international organizations to pay the cost, made most of the world safe, most of the time. Over the last two or three hundred years the explanations and the experiences of famine have been incorporated into economics, with much being rejected.⁴ Again, Sen's definition based on 'the stereotyped uniformity of food availability decline (FAD)' means that no analysis of famines using agricultural marketing economics fits his caricature.

In a long career I have never encountered any sign of any economist having 'an FAD approach' that fits Sen's caricature. Nearly everyone would start work on a food crisis by testing the hypothesis of a reduction in supply. This does not imply that they believe it is the only possibility or even the most likely. It is because the possible consequences of not doing so are so obviously disastrous. Most of these people would be acutely aware that if they mistakenly believed that there was plenty of food the effect

⁴ The lack of originality of Sen's work has been noted:

'Mitra (1982, p.488) makes this suggestion in the most trenchant manner: "Amartya Sen, I am afraid, has not said anything beyond what our great-grandmothers were already aware of". In a more scholarly vein, Rangasami (1985) has made the same point by claiming that the late nineteenth century literature on Indian famines was based on the spirit, if not the language, of the entitlement approach. (Osmani, 1993, pp. 40-41)

Hunter (1873) and Sir Bartle Frere (1874) gave detailed evidence and analysis of some effects of famine, such as the occupations of the people most likely to die, and the reasons for this. Mahalanobis, Mukerjee and Ghosh (1946) replicated the statistics part of their research. One table of this, rehashed by Sen, is the part of Sen's work that attracted most attention, and was the basis for claims that his was a novel approach.

would be catastrophic – famine would be inevitable. By the time the famine started it would be too late to import food: it takes months, sometimes more than a year, to secure donations, to ship the food, and to get it to where it is needed.⁵ If they mistakenly believed that there was a fall in supply and they imported, the imports could solve the demand shift problem if there was one. If they were not needed, the costs of an oversupply would be manageable. All the economists that I encountered worked with supply and demand at the same time.

I have worked in some countries with up to 80% of the population being in the subsistence sector and having a limited exposure to a money economy. All their governments had knowledge of the tribes and religions and their relationship to food; which tribes refused to grow famine emergency crops; which tribes had major food decisions made by a paramount chief or powerful induna, which by a local chief, which by the village headman, which by the paterfamilias, which by his wives. They knew about the flow of money and food between town and country, and how family, village and tribal ties affected this. They were aware of who had difficulty in buying food, and of food transfers in the non-money economy. The civil servants and economists I worked with were well aware of the problems that they, their extended families, and their neighbours had in getting enough food. So were the traders, farmers and consumers

⁵ In 1986 it took four months to get rice from Thailand, where shipping was readily available, to Sierra Leone, if money could be obtained. Unloading the ship and transporting food to an affected area can take months more. In Tanzania in the 1980s ships might wait outside the harbour for three to six months before they were unloaded, and it took six months to get food from the port to the affected area because of the collapse of the road and rail systems.

I interviewed. Even the rich countries are acutely aware that people go hungry and die early because of lack of purchasing power.

“The FAD approach has led to disastrous policy failures in the past. [Sen’s footnote:] The failure to anticipate the Bengal famine, which killed about three million people ... and indeed the inability even to recognize it when it came, can be traced largely to the government’s overriding concern with aggregate food availability statistics.” (Sen A. , 1984, p. 477)

This is an outright falsehood, *suggestio falsi*. The facts are that the decision makers in the Government of India, in the Government of Bengal, the governments of provinces with food surpluses, and the Government of the United Kingdom ignored aggregate food supply, preferring to believe in the myth that enough food was available – *exactly as Sen would recommend*. Obviously, if they had held the belief that there was a large fall in food availability, FAD, they would have imported a million tons of food, and there would have been no famine. Indeed, the famine occurred because the authorities had the beliefs that Sen later marketed as his own conclusions. His conclusions and recommendations, therefore, were tested in practice and the result was a famine. It was pointed out during the famine that the 1883 Orissa famine was known to have occurred because the authorities refused to believe that there was a food availability decline FAD.

When Sen was challenged on this (Bowbrick, 1986), he made no attempt to defend himself, but deflected the challenge by ridiculing the wording used by his critic (perfectly correct English used by a native speaker) (Sen A. , 1986, pp. 122,125).

The facts were set out at length in the post-harvest consensus, by the Famine Inquiry Commission (1945) and Knight (1954), for example, and by other contemporary observers.

Contrary to Sen's repeated claim, there were no food availability statistics during the famine, let alone the perfectly accurate statistics that Sen claims. *Suggestio falsi*. There were no statistics on food production, carryover or stocks, and import-export figures covered only one point of entry (Mahalanobis, 1943; Bowbrick, 2022). There were crop forecasts (not measurements) for just one food item, rice, but the view of the Indian statistics profession at the time was that the official forecasts were

'useless for any purpose'⁶, 'not merely guesses, but frequently demonstrably absurd guesses'⁷ 'a farce . . . a fraud'⁸ 'blatantly absurd results'⁹, 'disbelieved by the very government that produced them'¹⁰ 'no meaningful production statistics'¹¹ 'not only incorrect but absurd'¹² 'produced by a system inherently vicious'¹³

The Indian statistics profession thought that the lack of meaningful statistics was a key reason for the failure to deal with the famine and responded by developing

6 Bowley and Robertson (1934, p. 35) quoted by Dewey, 1978.

7 (Royal Commission on Agriculture in India, 1928, p. 605) quoted by Dewey, 1978.

8 (Dewey, 1978, p. 290)

9 (Dewey, 1978, p. 298)

10 (Mahalanobis, 1943)

11 (Bengal Land Revenue Commission, 1940, p. 76)

12 (F.H. Villiers to Sir Edward Grey, 1914, quoted by Dewey 1978 p284.)

13 (Trevaskis, 1931, p. vol 1 p 200) quoted by Dewey, 1978.

the crop measuring (not crop forecasting) system used now around the world (Mahalanobis, 1943). See Das (1949), Desai (1953), Dewey (1978), Tauger (2006; 2009), and Bowbrick (2020; 2022) for reviews of the literature on this.

The implication of what Sen says here is that anybody who does check on the availability of food in a famine situation holds the irrational FAD views of his ‘straw man.’ This would also imply that the entire Indian statistics profession at the time – including the greats – are labelled FAD. So are the agricultural officers who predicted a serious shortage, the grain traders who warned of a famine, the plant pathologists who noted the effect of a devastating outbreak of fungus, and the civil servants who searched traders’ stores in search of massive speculative stocks but found only below-normal stocks. The implication is that Sen’s abuse applies to them too. Academics may also abuse them, but more seriously, they suppress their evidence.

This massive contradiction makes his concept meaningless.

3.1 Other meanings of FAD

There is in fact a literature examining different possibilities of what Sen ‘really meant.’ Sen uses a range of descriptions of ‘Food Availability Decline’, and a range of descriptions of the beliefs of those who reach conclusions suggesting that a famine has been created by a fall in supply. His followers may use any of these or even completely different ones. The literature on ‘FAD’ is confused. Some people have developed their

own idiosyncratic versions, such as Rubin (2016; 2009), Nayak (2000), Devereux (2001), Osmani (1993), Fine (1997), Chakraborty, Achara and Sharangi (2022). More common is to select some of the definitions used by Sen and use them, perhaps avoiding some of the most obvious contradictions and absurdities.

The term has no meaning.

Some people believe that anyone who concludes that a fall in supply triggered any one famine anywhere is a believer in FAD and that their evidence, economic analysis and conclusions on this famine can, therefore, be ignored. Evidently, they are influenced by Sen's abuse. Some believe that any economist who concluded this about any one famine can be ignored in relation to any famine anywhere. This is a possible reading of Sen – he is anything but consistent in his definitions and use of language.

Daoud (2018, pp. 458, 459), for example, repeatedly accuses me of being an 'FAD advocate', solely on the grounds that, '*A series of natural disasters that occurred at the end of 1942 should be seen as the major cause of the famine (Bowbrick, 1986, 1987)*'. I am accused of holding absurd beliefs because *part of my analysis of this particular famine* did not support Daoud's belief that this famine was caused solely by changes in demand (Daoud implies that his belief is that this is the explanation for nearly all or all famines). Daoud appears to believe that this – 'being an FAD advocate' – is sufficient reason to ignore and suppress my work and the work of others who reached similar conclusions in its entirety. Rubin makes a similar claim that my '*arguments clearly belong to the FAD tradition*'. (Rubin O. , 2009) and ignores the large volume of facts and economic analysis that I and others produce to refute some of Rubin's sources.

Again, the implication is that they think that Sen's abuse is justified.

3.2 The effects of abuse and the FAD label

The 'FAD' label can have serious effects on academic discourse. Daoud and Rubin and most other commentators evidently consider that they are justified in ignoring any evidence or hard theory produced by people they believe to be 'FAD advocates' or people whose 'arguments clearly belong to the FAD tradition', and they do ignore it. They use the label to abuse. We may speculate that people like this will prevent publication of any papers or research that they believe to be tainted with 'FAD'. It is to be expected that researchers who are subjected to this abuse and whose results are suppressed are likely to move to other areas of economics. All of which results in extreme bias.

We have for instance Rubin (2009) labelling early warning systems as belonging to 'the FAD tradition'. Is there really anyone, including those who believe in Sen, who doubts that an early warning system can, in some cases, tip the balance and make it possible to prevent a famine? Is there really anyone who has not noticed that some countries are particularly vulnerable to famine caused by weather, for instance? Rubin implies that only an FAD believer would support early warning systems for supply: presumably a true Sen follower would abolish them.

The abuse can have serious impacts in the real world. I get satisfaction from producing competent economics, hard testable theory compatible with the facts. However, this effort is wasted unless I produce recommendations for action, and these recommendations are wasted if they are not read, accepted and acted on. To get action I have to convince economists in the host nation, international economists, agricultural professionals, administrators and politicians. This process sometimes breaks down when

important decision makers have a bee in their bonnet, a passionately held belief unsupported by evidence or theory but emotionally powerful. They may then reject economic advice. This may mean that their own economists and statisticians are afraid to speak up, and that they may be ordered to suppress relevant evidence and analysis.

I have talked to agriculturists who believed passionately and irrationally in a policy on grading which, they said, they had been taught in one of the half dozen lectures on economics in the agriculture degree they studied for thirty years earlier. This cost the EU economy hundreds of billions of pounds (2012).

What can we expect when large numbers of decision makers in a country have had just one lecture on famines, highly emotive, blaming 'FAD' for famines? People running early warning systems may be pressured, then fired, for taking action to prevent a famine, as I have seen.¹⁴ Agriculturalists and statisticians may be told not to communicate with economists? Economists may be too afraid to speak up. And, of course, decision makers in international organizations may also have been subjected to the same lectures based on emotional labels, and they may use this abuse to silence their workers in the field.

¹⁴ Steve Lombard was running an early warning system in Tanzania. He could not get the Ministry of Agriculture to act on an imminent famine, so he informed the World Food Programme and his contacts in the British press. The President learnt of the imminent famine from the BBC News. Steve was fired. The enormous pressure on him – he and only he could prevent the famine – was too much. He drank himself to death over the next few years.

4. REFUTATIONS OF ‘THE ENTITLEMENT APPROACH’

Defenders of Sen abuse his critics by accusing them of the heresy of trying to refute Sen’s ‘entitlement approach’. This abuse is used to justify suppressing the evidence and theory that the critics use to refute Sen’s economic theory (or model) of the Bengal Famine, and his theories of other famines.

We may take the example of how they abused me, (*‘Sen’s most relentless critic’* according to De Waal (2018, p. 48), *‘one of Sen’s most trenchant critics’* according to Atkins (2018)) and their abuse of my work. Sen supporters claim that I tried to refute the ‘entitlement’ approach, for instance (Devereux, 2001, pp. 245, 247, 260) (Fine, 1997, pp. 621-2). (Nayak, 2000, p. 5), (Edkins, 1996, p. 551), (De Waal, A, 2018, p. 48), (Pretty, Thompson, & Hinchcliffe, 1996, p. 11), (San-Ahmed & Holloway, 2016, pp. 2, 5), (Ansari, 2013, p. 26), (Dreze & Sen, 1989, p. 25), Mishra (2000, p. 81), (Kumar, 1987), (Mwaseba, 2005), (Clement (2009), (Nafzinger, 2006, p. 236), (Smith A. F., 2015), (Banik, 2007) and Osmani (1993).

All these claims are patently false – *suggestio falsi*. I stated repeatedly that I was not discussing ‘entitlement’ and I set out reasons why I did not do so:

‘It has not been the aim of this paper to appraise Sen’s entitlement theory.’ (Bowbrick, 1986, p. 123)

“The language of normal economic theory will be used, rather than that of Sen’s entitlement theory. There are several reasons for this. First, Sen himself used this language when dealing with the Bengal famine, with his occasional mentions of entitlement declines, etc, being external to his analysis. Second, we

are concerned with what actually happened, rather than with the labels put on the effects. Third, the use of the value-loaded vocabulary of entitlement would confuse people who are not familiar with it, or who do not agree with it. Finally, discussions have made it clear that different people interpret his entitlement theory in quite different ways. (Bowbrick, 1986, pp. 105-6).¹⁵

I set out the method that I was using: testing Sen's economic theory (model) of the Bengal famine, checking its facts, checking its theory, checking its internal consistency and consistency with what was observed, and checking the accuracy of its predictions.

'The appropriate method of examining a famine has nothing to do with the opposing dogmas of the FAD approach (if such an approach ever existed) and Sen's

¹⁵ This appears to have increased over the years: *'It is common for Sen and his defenders to dismiss critics of the entitlement approach as "misreading", "misinterpreting", or even "misrepresenting" Sen's intentions. But this begs the obvious question: How could so many academics have misunderstood what Sen was trying to say in Poverty and Famines ... I suggest that the confusion is largely of Sen's own making.'* (Devereux, *Sen's Entitlement Approach: Critiques and Counter Critiques*, 2001) p246

'the continuing controversy over Sen's entitlement approach to famine analysis is the result of the use of unclear and uncommon terminologies and their conflicting interpretations (Elahi, 2006; Gasper, 1993; Devereux, 2007).' (Elahi, 2017, p. 1)

entitlement theory. The approach normally used in examining price policy and marketing is rigorous and has an enormous explanatory power. A complex model is built up to take into account all institutional factors and other factors relevant to the market. Such a model has the advantage that factual inaccuracies are immediately revealed as inconsistencies. It also has the advantage of taking into account the agrarian problems, the price policies and the marketing systems that are all too often the underlying cause of the famine, and that strongly influence the course of the famine.’ (Bowbrick, 1986, p. 124)

‘It is always possible to provide a few facts in favour of the flat earth hypothesis or any other. Accordingly, this paper will examine each of Sen’s hypotheses to see if they are supported by all the facts, including those he does not quote. It is also possible to present a series of minor hypotheses, none of which is falsified by the evidence, but none of which receives much corroboration from it. The only satisfactory way of testing these is to see whether they are compatible with each other, and whether they fit into a general model of the market being examined.’ (Bowbrick, 1986, p. 106)

Osmani’s (1993) criticism of me is particularly interesting. He starts by assuming away all empirical models used by all Sen’s critics. As my work is entirely empirical, this leaves nothing to discuss about my work. Nevertheless, Osmani writes 1500 words imagining what I might have said about ‘entitlement’ if I had said anything, and then saying that these imaginary statements were wrong. This is pure fabrication

I discuss below reasons why academic researchers might lie about this.

4.1 Suppression of criticisms

There is another set of lies in this research programme, the systematic suppression of what Sen's critics said about his empirical models – suppressio veri. Most of his supporters do not mention these criticisms at all: this is a research programme where suppression of unwelcome evidence and criticisms is the norm. Those I have mentioned here cite very few of the critics, and each cites a subset of them. Most give no indication of what the criticisms were. A few have half a sentence giving a distorted view of what is necessarily a substantial, rigorous, carefully argued and complex refutation. In one case, there were three whole sentences, but these cram in an amazing array of falsehoods.

4.2 Refuting Beliefs

Some of Sen's defenders respond to any criticisms of Sen's empirical work with the statement that no weaknesses in his empirical work, in his economic models of different famine situations, can refute or discredit his 'entitlement' theory in any way (e.g., (Cutler, 1988, p. 42), (Osmani, 1993), (Devereux, 2001, pp. 24, 260), (Fine, 1997, pp. 621-2)), (Lin & Young, 2000, p. 136), (Kumar, 1987), (Dreze & Sen, 1989, p. 25). This may underlie the false claims by others that I and other critics were trying to refute the 'entitlement theory', and indeed the refusal of most people following Sen to mention any of his critics. By falsely claiming that we were attempting to refute 'entitlement' they are stating that the attacks were misconceived and should be ignored. In fact, the

critics attacked Sen's empirical work, and most attacks were rigorous and evidence. So the defenders lie.

They are formally correct that 'Entitlement theory' and the Food Availability Decline beliefs are ideological – belief systems which cannot be tested as there is no conceivable set of facts that would refute them. The same is true of the theory that famines are caused by the Famine Fairy waving her wand – there is no conceivable evidence that would prove or disprove it. Popper (1975; 1974) states that theories that cannot be tested are not 'scientific'.

Real-world economics, on the other hand, produces testable, 'scientific' theories. An economic model of the Bengal famine for instance, is 'scientific' because it may be refuted by showing that its facts are wrong, that its logic (including statistical analysis) is wrong or that its predictions are wrong. Real-world economists work by refuting existing economic models, their own or other people's, and replacing them with better models, then repeating the process, hoping to end up with a model that cannot be refuted. The credibility of the economic models comes from the fact that they have been tested. Generalizations and simplifications of these specific models produces more widely applicable theory, textbook theory for instance. This can be very useful as long as its assumptions are carefully set out and are realistic. At the other extreme, 'Pure theory' – logic applied to assumptions – can only be refuted by showing that it is illogical – its assumptions may have incompatible implications, for instance. 'Pure theory' may be perfectly logical and so irrefutable, but be totally useless, perhaps because of unreal assumptions.

Beliefs that cannot be tested against reality in these ways are considered 'non-scientific' (Popper, 1975; 1974). They are not even 'pure theory'. The 'entitlement'

approach is such a belief system or, rather, bundle of overlapping belief systems, all claiming to be derived from the works of one guru, Sen. It is not possible to prove them or disprove them. These beliefs, like the belief that the cause of famines is a famine fairy waving her wand, are ‘non-scientific’ and cannot be disproved.

Beliefs like ‘entitlement’ or the Famine Fairy ‘explain’ everything that may happen, and it is a truism that a theory that explains everything explains nothing. The strength of a scientific theory is in what it forbids: if A, B and C are true, then X, Y and Z are false. Real world economists work to produce a coherent theory of a real-world situation which forbids nearly everything, so that a rational decision can be made on the few possibilities that remain.

These defenders of ‘entitlement’ conceal the many weaknesses in real world studies of famines that the critics have identified, and do not explain them. And they do not attempt to challenge the criticisms. *Suppressio veri, Suggestio falsi.*

4.3 Discrediting belief systems

Untestable belief systems like Sen’s views on ‘food availability decline’ or ‘entitlement’ disappear only when they become unfashionable. The history of economic thought is littered with now-unfashionable beliefs. They may be *discredited*, not disproved. One way is to discredit the author, the guru. Another is to discredit the people who use or develop the theory. It has been shown that the ‘entitlement’ theory, when used by its originator and his followers is incapable of identifying the falsehoods of commission and omission, the many impossibilities, the assertions not supported by

evidence or theory and so on in Sen's work, which makes it questionable what justification there is for its existence.

The keenness of Sen's followers to suppress and misrepresent criticisms of his empirical work suggests that they are doing so to conceal evidence that might discredit Sen. I (1986) examined Amartya Sen's theory of the Bengal Famine. I made the following claims. Sen systematically misstated the evidence in his sources on more than 30 key facts, always in a way that supported his argument. Sen based much of the rest on unsupported assertions. The theory linking these assertions with his conclusions is wrong or non-existent – he produces no theory or evidence to support his claims that speculation or inflation were causes of the famine, for instance. Sen used meaningless data on food availability and on prices, and his statistical analysis of this was wrong. Sen claimed that the famine in which 5% of the population died and 60% went hungry, was caused by an increase in demand of 1.8%. Elsewhere he claimed that one million people ate six times as much per day as normal during the famine period – which is clearly impossible, even if we ignore the fact that they the extra food would have cost four to twenty times the normal price. (Bowbrick, 1986, p. 117). Unusually for economics, it is possible to test Sen's conclusions by its predictions: Sen's diagnosis of the problem and his recommendations for dealing with it are in fact the same as those of the authorities in 1943: they were put to the test and three million people died. Six of the thirteen rigorous, formal, evidenced, refutations that I presented were fatal to Sen's entire theory, and seven were fatal to sections of it. The refutations are independent: if one failed, the others would still stand. Sen did not challenge these refutations: he presented new

falsehoods, sneers, snide remarks and abuse, as is his normal practice.¹⁶ He has not retracted or altered anything he has written in response to these criticisms or other people's criticisms. Nor has anyone else attempted to refute my facts or theory. More contemporary evidence has come to light which confirms and adds to these refutations: see Dewey (1978), Tauger (2003; 2006; 2009) and Bowbrick (2020; 2022) for extensive reviews of this evidence.

I would expect my colleagues, top agricultural economists with wide experience, to observe within twenty minutes that there was something very strange about Sen's theory of the Bengal Famine, and to identify at least one way in which it is logically impossible within a few hours – the testable and tested agricultural economics theory shows his claims to be impossible. And, of course, once someone else has pointed out impossibilities, any agricultural economist would understand them. It is a matter of a few hours work to check whether the facts are right or wrong.

My 1986 paper was written by one of the top experts in food and agricultural markets at the time and published by the top specialist journal in the subject at the time, and it was 18,000 words rather than the normal maximum at the time of 3500 words – at the request of the editor and referee - so it would be rational to read it with care. Again, refutations are fundamental to science, and one would normally expect a refutation to be worth a hundred routine papers, sometimes many times more, and so, again, we would

¹⁶ Some examples of this abuse can be seen in Nolan P. , (1991); Sen A. , (1991); Nolan & Sender, (1992); Sen A. , (1992); Nolan P. , (1993); Sen A. , (1993). He produces new falsehoods with abuse when replying to Bowbrick (1985; 1978; 1986), to Tauger's (2011) criticisms, and to Mukerjee's attack on Churchill (Mukerjee, Madhusree, reply by Amartya Sen, 2011). Bowbrick (2020) produces a detailed analysis of Sen's carefully thought-out obfuscation.

expect people to read them with care. Some people, it would seem, did read it with care but chose to misrepresent it.

So, we have here clear research misconduct by Sen. The research programme that covers it up must be taken to be fraudulent.

5. POLICY IMPLICATIONS

When large sums of money can be made or lost in an agricultural market, governments and firms expect real-world economists to base their recommendations on rigorous analysis using hard fact and hard theory. The reality is that this is not enough. Inevitably, the decision makers – politicians, administrators, agriculturists and economists – have their own beliefs, which we have to address if our recommendations are to be accepted, paid for, believed and acted on. Many of these are myths, beliefs for which no evidence currently exists, and many of the myths are obviously rubbish. The myths may be the rumours which fly around in a food crisis, and are firmly believed for a short period, and people believe contradictory myths. And politicians have to take the myths believed by the public into account, even if they believe them to be wrong.

Myths, falsehoods and bad economics produced by academics are harder to deal with. We have to deal with people who were taught bad economics in their one lecture on famine in their one module of economics, and we have to deal with economists who are superb in their own specialties and who think they can master the economics of food markets and famine by reading a couple of papers, or by attending a conference.

When writing on famines, many academics choose to adhere to ideological beliefs and to use abuse to suppress the hard economics and hard theory which shows that the books and papers which they rely on are full of falsehoods. They suppress the fact that the guru they rely on has been accused of systematic fraud combined with abysmal theory. They are very successful in this.

Clearly money matters. Do black and brown lives matter? Evidently not.

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