DI k; 2 by - 0 km²-mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm	: excess ; [+ +] [(0; 05050+]	(† (çd5-çd5d5 % † † Y8(41 @ YSE E 1 1 1 1 YSZ @1 % b e40 05: Q*U	É É Î u5'É É Î WHAT IS THEIS THEIS C	CALLED SOCIAL JUSTICE AND WHAT DOES IT HAVE TO DO W	THE US IN THE CONTEXT OF GLOBALISATION? Bill Atweb Curtin Univer	N. Phiji J. McKeller-Hij H. H. One of Tamberg C. McCondition and account to prepare forth year open prepare for any interest to the prepare forth year open prepare for a few prepare for the
the debate about the construction of social justice in mathematics educatio informed by the writing of feminist writers such as Iris Marion Young (19 variety of social justice concerns in the discipline, I will focus the discussi-	m and secondly to use that construction to reflect on issues affecting the wor 90) and Nancy Fraser (1995, 1997; Fraser & Honneth, 2003). In particular, I on on an issue of increasing importance in mathematic education, namely int	k of mathematics educators in an international areas. It builds on previous work with many argue for the importance of engaging with the concept of social justice itself in addition to emaineal cellaborations (Atroch & Clarkson, 1991). Why Engage with the Concept of Soci	of my colleagues on issues of globalisation and internationalisation in mathemati mgaging with practices that promote social justice. Similarly I discuss an approac al Justice? Atweh and Keitel (in press) note that social justice concerns are no long	cs education (Atweh & Clarkson, 1991; Atweh, Clarkson & Nebres, 199 h to understanding social justice practices that goes beyond more analyse ger seen at the margins of mathematics education policy, research and pra	3) and on social justice in international collaborations in our discipline (A sand deconstruction and is capable of providing normative guides for practice, losses relating to gender, multiculturalism, ethnomathematics, and t	Usweh & Ragusa, 2003: Ragusa & Atroch, 2003; Abroth & Keitel, in press; Abroch, incities. Finally, I raise some problematics in making social justice claims and engagin the effects of ethnicity, Indigeneity, socio-economic and cultural backgrounds of str.	2007). The theorisation of social justice presented in the previous publications, also adopted here, is up in practices that promote social justice. While many of the issues raised here might apply for a alcents on their participation and performance in mathematics are orgalarly discussed in the literature.
Many of these have found their way into policies in educational systems a "contested area of investigation" (Burton, 2003, p. xv). Firstly, at the risl "our judgement about whether or not a given state of affairs is just" (p. 29)	around the world. More recent concerns about access to appropriate mathema is of essentialising the difference between the USA's and Europe's writings i, implies that equity is the measure to know if social justice has been done. I	ties education by students with learning difficulties and special needs, the gifted and talent on social justice, there seems to be some difference between its conceptualisation in the two fact (2003) sucs a smallidimensional definition of equity as equal opportunity, as equal treat	ol, and the so called "what about the boys" agendas are increasingly being constru- contexts - at least in mathematics education. In the US, social justice is often use ment and as equal outcome and concludes by saying that "I will use equity, as See	ucted as social justice issues. Undoubtedly, different writers have differen of interchangeably with the constructs of equity and diversity. For examp cada did, to mean justice" (p. 23). In the same volume, Secada, Cuets	t understandings of social justice – at times leading to alternative, if not co sle, Hart (2003) asserts that "Because the terms equity, equality and justice to and Andrade (2003) note that "the viewing of group-based inequality as	onitradictory conclusions and demands. Although social justice represents a strong as t have been used in different ways in the literature, it is important to briefly consider s an issue of equity has a long tradition within policy-relevant social science research	nea of educational discourse, the term itself remains under-theorised (Gewirtz, 1998, Rizrs), 1998) as some of the meanings of those terms" (p. 29). Using Socada's (1989) conceptualisation of equity as h and in different forms of educational research in particular" (p. 108). In an attempt to differentia
between equity and social justice, Burton (2003), from the UK, in her into the traditional equity discourse in determining questions as who is entitled concert of courts areas from and is often associated with a though not ex-	reduction to her book "Which Way Social Justice in Mathematics Education for equity measures and how to avoid the individual selfishness at the expensi- chariety a sender concerns the concern of descripts are self-sen, and is often	", argues that there is a "shift from equity to a more inclusive perspective that embraces soci is of the group's benefit. Similarly, he argues that the construction of an individual as a men to sure visited with a threath one are desirable, a conserve when outward and limitative discussion.	al justice" (p. xv). She goes on to say "the concept of social justice seems to me to her of a single social group deserving equity measures in problematic. Finally, equ. (Sembor's & Warner, 2000). Thorans, 1906. Phormor (2003), because measures	o include equity and not to need it as an addition. Apart from taking a hig ity measures tend to deal with a single recipient of the benefits and not as an exercise of what he colla the "his K" demonstrate of describe two as	phly legalistic stance, how could one consider stenething as inequitable as a member of a social group that is systematically excluded. Similarly, the other other-the instruments, commissional role, are served orientation, more	socially just?" (p. xvii) Further, the equity agenda has been critiqued in the literature social justice agenda in mathematics education is at times discussed in relation to di inhibitorical shifts; and religion. In this context, accept inside is constructed or.	e in its ability to provide for a normative guide for practice. Wennel (2001) discuss the difficulties will receive — also a term that has its origin in the USA Identator (Loden & Rossner 1991). While the using discussion (Con. 1901; Kell 2003). Holescholody the increasing discussion of substantia must be
mathematics classrooms and the persistent research evidence that some gre consideration the changing constructions of these labels and their contextu	sups of students are not achieving or participating in mathematics, raise serio al understanding in time and place. Similarly, the diversity discourse fails to a	us social justice issues. However, the diversity agenda is not only concerned with the purici- sleepastely take into consideration one of the biggest threats to social inequality and exclusio	pation and achievement gaps but also with acknowledging the contribution of the in mathematics education, namely socio-economic background and poverty that	different groups to mathematics and to the consideration of different types are difficult to construct as diversity issues in the same was as cultural di-	s of mathematics and different ways on knowing as illustrated in certain fo ifferences. In spite of the overlap in the aims of both agendas of equity an	mainst writings and the ethnomathematics movement. However, the diversity disco d diversity, there is an important difference between them that leads to potentially c	urse might lead to essentialising the differences between the different groups and it may fail to take in contradictory outcomes. This relates to their ultimate aims with regard to group status. Equity projects
On the other hand, the diversity agenda might be vulnerable of somanticisi Frankenstein, 1997). Similarly, in mathematics education, the establishme	ing difference between groups by treating them as exotic, while the equity agent of the International Commission of Mathematics Instruction (ICMI, Unda	ends highlights their exclusion and disadvantage. I will come back to these points later in the tot) in 1908 was both a reflection of the belief that mathematics educational problems can,	paper. I turn now to question of social justice in international collaborations. We and need to be solved globally, and at the same time provided promotion of that	y Engage with Social Justice in International Collaborations? International conviction. With case of travel and communication and greater awareness	al contacts in mathematics have a very long history that proceeded the era is of developments and the needs of various countries, contact between m	of globalisation. The transmission of mathematical knowledge from the East (e.g. k athematics educators has escalated and taken diverse forms. While mathematics ed	ndia) and the South (e.g. Arabia) formed the roots of mathematics as a discipline in Europe (Powell & incates have always shown an acute awareness of the international status of their profession (as
widely covered by media and featured in public debates about education. systems. Outcomes of such studies are also perceived as necessarily reduc-	ional in their track), mere has been little protections and testing have been ad- tionist, as results cannot do justice to the very complex factors involved. The	nt and research accuracy arount one cements or proceeds man might arise, we main the past un- directed cleavehere (Clarke, 2003; Kinser, Larna, & Huntley, 1999; Robettaille, & Travers, H e authors claim that the mathematical tasks do not represent the carricula tanght in many sc	re decision, municimistic contention has witnessed an increase in cross amoreta con 9/2). In particular, Keitel and Kilpatrick (1999) misse several political questions al- tools, teachers' questionnaires do not represent the whole range of teaching pract	spararive statics on curriculum and stratest actiovement, pentags me too out such international comparative studies. They argue that the outcome ices, and the results do not offer valid comparisons between the various	it known are the 110056 (1 into international standermatics and science of its of these studies are perceived as biased towards the hist country; that is countries' curricula with their divergent cultural and social contexts. "No a	day) and PESA (Programme for international Student Association) students. I these attempts, of those whole do the data collection, the analysis and the funding. These authors is allowance is made for different aims, issues, history and contexts across the mathem	makes more received considerance anomaton waran and ontoke use near, anomatonia teating has been question if this is to the destributed of other countries and their concerns about improving education nation curricula of the systems being studied" (p. 243). They conclude that comparaive testing is not
really useful as an educational tool, as it does not produce a clear view of education in different contexts. Jacobsen (1996) discusses the increasing g beyond the carobilities of single academics or even the profession as a wi-	what's really happening in the classroom and why. Of particular relevance h pap between the rich and poor countries and the curtailing of funds from these sole working in isolation. However, such a call presents a challenge for acad	ere are the differences in performance between industrialised and less-industrialised country international agencies that makes it "more difficult to look for governments for improved it emics who believe that concerns about social instice do not know are boundaries. Views or	is that these tests show. For example, Gliewwe and Kremer (1995) show that sch international co-operation in mathematics education" (p. 1253). He joins Mignel d precised by mathematics educators about international contacts and activities var	ool students in most less-industrialized countries achieve less than compare Gazman, the past President of ICMI, in calling for an increasing role of c. For some, international interactions lead to preater awareness and under	arable students in more-affluent countries. Moreover, the gaps are estimat f co-operation between professional mathematics educators and their asso retanding of difference which, leads to assisting the less able, to tolerance	ted to be 3 years of schooling for comparable age groups. Undoubtedly, these gaps citations to work to improve mathematics education worldwide. Arguably, solving t e and conflict resolution. Other these educators achieve areater conceious understar	s can be explained to a large extent by the amount of available resources devoted to mathematics the problems of inequitable achievement and available resources in less-industrialised countries are deline of their own assumptions and salient aspects of their own practices. To others, such contacts m
lead to homogenisation, colonisation and to the marginalisation of the 'hav on international loans to develop their education systems and infrastructure materials to the substitute of court of the colonis to the colonis of the colo	e nots". In any case, there are several social justice issues in international cor e often face additional requirements for specific types of "reforms" that neces	stacts. First, there are different, and at times conflicting, motivations behind international col- sistate contacts with overseas educators and systems. Other international collaborations are	aboration. In a globalised world dominated by economic rationality, many of their used on more altrastic metrications such as the provision of assistance for country	e international collaborations have their roots in financial benefits to the p ies with limited resources to develop their capacity to build their infrastre.	uricipants. For example, as many universities around the world are facing acture and educational reform. Perhaps such collaborations are based on the	a reality of reduced government funding, they are turning to international students a he premise that mathematics is associated with economic development and prosperi	and projects as a significant source of income. Similarly, many less industrialised countries that depen try, hence assisting poster countries through establishing a solid mathematics education system may
activities that are in English. The final report of a recent Discussion Group almost opposite meanings for a native English speaker and speakers of oth	on International Cooperation at the International Congress of Mathematics I er European languages. Further, care must be given not to exclude some part	iducation (Atwoh, Boero, Jandak, Nebers & Valero, 2004) identified further problems arisis icipants from having access to that technical language by oversimplifying it. Hence, genuin	g from language: In addition to the dominance of English in many international co e cooperation must include a process of communication in which, through language	operative activities, the problem of language is also a matter of particula es (natural and specialized), the parties involved negotiate their meaning	r professional jargon used in different national communities to refer to the s and intentions for action. (p. 3) Third, international collaboration may be	objects of their practices. Problems of understanding emerge due to differences in ave serious negative effects on some puricipating countries. Without due care, colla	the meaning of commonly used terms. For example, the phrase "districts of mathematics" carries shoration between educators with varying backgrounds, interests and resources may lead to domination
Social Justice in a Complex Globulised World? Marion Young (1990) arg in society rather than mere outcomes. McInerney (2004) argues that a soc	tuer, uncernical contamonation may continue and to the any resourced continue, pure that principles of social justice are not theorems. Rather, they are claims tiety cannot be called just unless "it is characterized by a fair distribution of r	wan a missionary arinne into teats to a purrounnily remissionally, which does not respect to of some people over others. They are not bused in abstract general principles that can be a naterial and non material resources" (p. 50). Rawls (1973, in McIsemey, 2004) claims "the	no varies use enversory or me parties strovered, instead, an attenue or mainty and optical to specific practices and situations in all localities and societies. According primary subject of social justice must be the basic structure of society, or, more	operation to searn from each others should be the mass of international co to Young. "they are [arguments] addressed to others and await their resp precisely, "the way in which the major social institutions distribute fundam	r-operation. (p. A.A.). At wen and scritt (in press) stowed that discritical coponies, in a situated political dialogue" (p. S). Traditionally, the conception nental rights and responsibilities and determine the division of advantages:	contacts netween countries can be exponentrie, acan mon marginansiation and power in of a social justice model was based on the nedictribution of resources and goods, it from social cooperation*** (p.50). At the same time as he is affirming the individual it	nessness, and re-considered as a norm or symmotic imperiation and vicence. The vicence includes whether material or symbols. Destribution models of social partice focus more on unequal opportuniti rights to pursue goods, he is insisting that distribution of wealth, income, power and authority are
justifiable if they work to maximize the benefit of the least advantaged in s the reasons for the inequality that have historical roots and are socially and Relational models of social justice deal with 'the nature and ordering of so	society. Gewirtz (1998) identifies two forms of distributive justice: a weak fo I politically determined. Arguably the majority of compensatory programs to cial relations" (p. 471, italics in original). Gewirtz goes on to indicate that "li-	erm, equality of opportunity, and a sitong form, expality of outcome. In education, distributi- increase the achievement of target groups in education follow this construction of social jus- se relational dimension is helistic and non-atomistic, being countrially concerned with the nat	re models of social justice are reflected in compensatory programs allocating desig tice. Several postetracturalist feminist writers have critiqued distributive models. O are of inter-connections between individuals in society, rather than with how much	mated resources for the disadvantaged. However, this model does not que lewirtz (1998) argues that relational understandings of social justice are re individuals get" (p. 471). Marion Young present a critique of traditional	estion the curriculum itself, the pedagogy or the regimes of testing used in needed in order to "theorize about issues of power and how we treat each conceptions of social justice in that they are based on "turing" rather tha	the classroom and their role in creating obscational inequality. Further, it construct other, both in the micro face-to-face interactions and in the sense of mucro social: in "doing". Grounding social justice in individual solutions that allow little room for	s the disadvantaged as individuals and not as parts of a collective. Finally, it does not take into account and economic relations which are mediated by institutions such as the state and the market" (p. 471), the consideration of multiple social groups is inadequate. Furthermore, extending such models,
developed on the distribution of material goods to other goods such as sell political struggle. (p. 68) In response to the critique that giving attention to	f-cospect, honour opportunity, and power, is problematic. To understand the o cultural recognition might have devalued economic inequality that is best all	struggles for social justice by a variety of groups, such as women. African Americans, and leviated through a distribution model, Fraser (2001) argues that social justice today requires	gay and lesbian people, feminist theorists posited a discourse of social justice to both redistribution and recognition measures. She presents a model of "purity of j	sed on the principle of recognition. Nancy Fraser (1995) expounds: Demonstricipation" as a guiding principle that incorporates both models. In late	nands for "recognition of difference" fuel straggles of groups mobilised une or publications (Fraser, 1997; Fraser & Honneth, 2003) she presents what	der the humers of nationality, ethnicity, 'race', gender and sexuality And cultur t the calls a "critical theory or recognition" that avoids reducing one dimension to the	al recognition replaces socioeconomic redistribution as the remedy of social injustice and the goal of he other and avoids failing into postmodem non-normative deconstruction. Importantly, Fraser argues
translated into the dilemma that Fraser (1997) calls the distribution-recogn generative framework" (2001, p. 82). It remains to be shown how these th	ition dilemma. To deal with this dilemma, the author introduces two further a coretical tools assist in a resolution of the dilemma discussed above. I will to	analytic tools to describe remedial action for social injustice. Fraser differentiates between a rn to this in the concluding section after a reconsideration of social justice remedies in inte	firmative and transformative remains for inguistic and agains that they cut across national collaborations. How to Engage in Social Justice Action in International Collaborations.	the redistribution-recognition divide. Affirmative remedies include those ollaborations? Based on this discussion and on a similar model suggester	"aimed at correcting inequitable outcomes of social arrangements without d by Fraser, in another context (Atweb, 2007) I have put forward a model	disturbing the underlying framework that generates them: (p. 82), whilst transform comprised of four modes characterising possible cross national collaborations towards.	native remedies are "himsel at correcting inequitable outcomes precisely by nontractaring the underlying arts achieving social justice in international collaborations. In the previous publication I have discuss
relations of knowledge production. Blurs group identification. Can help res gatherings and publications. Remedies that are often provided to overcome	nedy misrecognition. Recognition Mode 3: Multiculturalism Attributes: these indicators of social injustice take the form of sharing of programs and	cci concurators from Latin America (prizzi), Cotombra and societico) and Asia (Sotan Assea, Acknowledging cultural differences, such as cross cultural research. Supports goop identifi- curriculum or financial assistance to academics from less affiaent countries to enable a few	one resupptines, and vacuum) that I considered between 2001 and 2002. I was a cartion. Mode 4: Critical Collaboration Attributes: Deep restricting of relation of them at least to participate in such international gatherings. This aid mode of c	nty provide a summary of these points need. Attinuative Transformative of recognition. Blars group differentiation. Affirmative-redistribution ollaboration is based on the transmission of goods, (either material or syr	we Registrousist Stocke 1: And Antistude: Staining of information and in for social injustice remedies target the lack of resources and absence of t inbolic) from one culture to another can give rise to sensous concern. To st	I resources among consumes, acquescens cumman cassuments on uses upon access to traditions of internationally acceptable research and theorising of mathematics ordec- art with they often lack eciprocity among the players leading to a form of coloniali	is anomongle. Lun generate morecognition. Mode 2: Development Aumentain Restrictions and the exclusion of academics from these affinest countries in many international collaborations, institution of mathematics education from the North to the South and from West to East. Further, they give
rise to problems of misrecognition of the aid recipients as not having somet Frankenstein, 1997). The contribution of the ethnomathematics movement enabling of the marginalised academics and cultures to develop their own	thing worthwhile and original of their own to contribute to the international st to increasing awareness of complex mathematics in the daily practices of m capacity to generate their own knowledge, research and theory about mathe	atus of the discipline. Finally, they lead into a condition of dependency on donor countries is any social and cultural groups has undoubtedly lead to the abolishing of the myth of underi- matics education. Hence it effects a change of pre-existing patterns and norms of knowledg	not their contribution to capacity building is minimal. The affirmative-recognition evelopment and primitiveness from these societies. However, its contribution to it is production and may have short or long-term effects. International interactions up	mode of remedies targets the lack of recognition to the mathematical kno he emancipation of members of these societies is not as clear (Dowling, I nder this model include international postgraduate students from less indi	wledge that different cultural groups have developed and use in everyday 1998; Vithal & Skovemose, 1997). Hence, it contributes to the recognition astrialised countries and programs that contribute to the professional devel	transaction as valid mathematical knowledge and the contribution of the different g in of the other without necessarily contributing to alter or change access to, or prodia lopment of educators. However, it is usually unidirectional with clear demacation by	roups to the mainstream mathematics education often identified as Anglo-European (Powell & ction of, material and/or symbolic goods. The transformative-recognition mode of remedies targets the setween the providers and eccipients of development. Similarly, this mode of interactions does not
necessarily problematise differences in interests and needs of the different per challenge the structures that give rise to inequality in status, as well as the	participants; hence it leads into blarring of cultural differences. Finally, the tra knowledge shared, among nations. Critically collaborative activities are necessarily to the transport of the	asformative-recognition mode of remedies targets the deconstructions of the binaries that c sources based on participation from educators in different countries as all work to develop b	onstruct academics from affluent/developed/industrialised and those from poor/an cal knowledge and simultaneously contribute to collective international knowledge	dendeveloped less industrialised countries and attempts to develop critical e albeit it is not universal but always contextualised. What Can we Concl	I collaborations that are mutual and lead into reciprocal learning. Like mul lude about Social Justice and about International Collaborations? This pap	liculturalism, critical collaboration aims to give recognition and respect to the know see has set to promote the debate on the construction of social justice in mathematics	whedges different cultural groups and countries provide. However, in this category effort is made to seducation and on social justice in international collaborations. It argued that even though social justi-
construction, social justice can aim at redistribution of goods (material or a action and actionless reflection. Secondly, in this paper I have turned a crit	symbolic) to alleviate inequality and disadvantage as well as merease the reci ical gaze on the practice of mathematics education in an international context	ognition to the marginalised and misrecognised. I followed Nancy Fraser's arguments that n With the rising evidence about inequality in achievement in mathematics from students in	either of these dimensions is reducible to the other. However, there are potential so different cultures and the lack of participation of academics from less industrialises	succes of conflict between them. The critical theory of social justice sums I countries in international efforts to solve problems of mathematics educ	marised here may lead into a more informed and self reflective action that ation, the social justice implications of international collaborations can and	alternepts to identify and address achievements and limitations of social justice action if should not be overlooked. However, not all action towards achieving equity, no ma	 hence it is built on a transformative agenda that avoids falling into the two externess of unreflective after how well intentioned it is, is sufficient to achieve social justice. Here I argued that modes of
world, the work of the majority of mathematics educators has international the Tenth International Congress of Mathematics Education (ICME10). A	i materitatics enticators to constrorate across country their and access to res I dimension. Such components can either be part of the problem or part of th tweeh, B. & Clarkson, P. (2001). Internationalisation and globalisation of m	ources and as the some time cinatemps the retaines in terms or mer occupyonans is a worth a solution of social nijustice in the discipline. References Alvech, B. (2007). International in athernatics education: Towards an agenda for research/action. In B. Atweh, H. Forgasz, &	rite endeavour, seamernatics edicators who are communicated to touses or equity, or tractions in mathematical education. In U. Gellert & E. Jablonka, (Eds.), Mathem B. Nebres (Eds.), Sociocultural Research on Mathematics Education: An Interna	versity and social pastice in any of the maintenantons of the injustice in in- nativation and Demathemativation: Social, Philosophical and Educational tional Perspective (pp. 77-94). New York: Erlbaum. Atweh, B. Clarkson	e discipulae can not ne consistent in metr commissions without paying and Ramifications, (pp. 171-186). Rotterdam/Taipei: Sense Publishers. Atwo n, P. & Nebres, B. (2003). Mathematics education in international and gl	minon to tostus or social justice in international controllerans. Social space entows di, B., Borot, P., Jurdak, M., Nebres, B. & Valero, P. (2004) International Cooper lobal context. In A. Bishop, M. A. Clements, C. Keitel, J. Kilpartick, & F. Leang (no nanoma ana cuntra) commantes. More generatay, in an incervaning internationalised and giomateix aiton in muthermatics educations: Promisses and Challenges: Final Report of the Discussion Group 5: (Eds.), The Second International Handbook of Mathematics Education, (pp. 185-229). Doedwecht
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